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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,712	11/25/2003	Dae-Kwang Jung	5000-1-490	6298
33942	7590	12/28/2006		
CHA & REITER, LLC 210 ROUTE 4 EAST STE 103 PARAMUS, NJ 07652			EXAMINER SEDIGHIAN, REZA	
			ART UNIT	PAPER NUMBER
			2613	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/28/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/721,712

Applicant(s)

JUNG ET AL.

Examiner

M. R. Sedighian

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-14 is/are allowed.
- 6) ☒ Claim(s) 15 and 17-19 is/are rejected.
- 7) ☒ Claim(s) 16 and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 4/24/06, 3/3/06.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 15 and 17-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Yoshimura (US Patent No: 6,975,586 B1).

Regarding claim 15, Yoshimura teaches a self healing WDM (Wavelength Division Multiplexing) – PON (Passive Optical Network) apparatus having a CO (Central Office), a RN (Remote Node), and a plurality of subscriber units (6, 2a, 71, 72, 91, 92, figs. 3, 5, 6), comprising: a trunk working fiber (col. 6, lines 30-32) and a trunk protection fiber (col. 6, lines 30-32 and figs. 3, 5, 6) for connecting the CO (6, fig. 5) with the RN (2a, fig. 5); and a distribution working fiber (11a, VP1, figs. 5, 6) and a distribution protection fiber (VP1a, fig. 6) for connecting the RN (2a, fig. 5) with the subscriber units (col. 6, lines 32-40 and 71, 91, 72, 92, fig. 5); wherein the CO (6, figs. 5, 6) contains an upstream working optical receiver (1a, fig. 5) for receiving upstream data (col. 6, lines 14-20), a downstream working light source (1a, fig. 5) for transmitting downstream data (col. 6, lines 58-64), a first optical switching unit (4, fig. 5) for switching to a connection state so that the CO communicates with a subscriber via the trunk protection fiber (VP1a, fig. 6) if an error or communication failure occurs in the trunk working fiber (col. 7, lines 48-65 and VP1, fig. 5); and wherein each of the subscriber units (71, 72, fig. 5) contain a downstream working optical receiver (31a, fig. 5) for receiving downstream data (col. 7, lines 35-37), an upstream working light source (31a, fig. 5) for transmitting upstream data

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(col. 7, lines 48-53), and a second optical switching unit (81, fig. 5) for switching to a connection state (col. 7, lines 13-20, col. 8, lines 22-25) that the CO communicates with a subscriber via the distribution protection fiber (VP1a, 81, fig. 8) if an error or communication failure occurs in the distribution working fiber (col. 7, lines 48-67).

Regarding claim 17, Yoshimura teaches the CO (6, fig. 6) further contains a downstream protection light source and an upstream protection optical receiver (1b, fig. 6).

Regarding claim 18, Yoshimura teaches each of the subscriber units (71, 72, fig. 6) further contain an upstream protection light source and a downstream protection optical receiver (31b, fig. 6).

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshimura (US Patent No: 6,975,586 B1) in view of Kumozaki et al. (US Patent No: 5,539,564).

Regarding claim 19, Yoshimura differs from the claimed invention in that Yoshimura does not specifically disclose the CO and the subscriber units each further contain a WDM for adding/dropping upstream/downstream working signals, and another WDM for adding/dropping upstream/downstream protection signals. Kumozaki discloses bi-directional optical communication (720, fig. 2) between a central office (100, fig. 2) and a plurality of subscribers (300, 400, fig. 2) by incorporating a WDM for adding/dropping upstream/downstream working

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signals (313, 413, 113, fig. 2), and another WDM for adding/dropping upstream/downstream protection signals (323, 423, 123, fig. 2). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to incorporate WDM add/drop couplers such as the ones of Kumozaki, in the CO and subscriber units of Yoshimura to selectively add or drop the transmitted and received optical signals.

5. Claims 16 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Claims 1-14 are allowed over prior art of record.

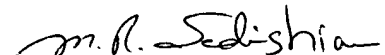
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. R. Sedighian whose telephone number is (571) 272-3034.

The examiner can normally be reached on M-F (from 9 AM to 5 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


M. R. SEDIGHIAN
PRIMARY EXAMINER